



Dealing with Construction and Demolition Debris in Rural Alaska

ADEC Solid Waste Program



What is Construction and Demolition Debris?

Commonly known as “C&D” – It is waste material generated by anything from a home remodel to a full demolition of a building. In rural communities, the source is often construction, demolition, or renovation of community or commercial facilities and water/sewer systems.



C&D Debris





ISSUES with C&D

- It requires proper planning ahead of projects
- It takes up valuable space in the landfill
- It's bulky and hard to compact
- It's expensive to ship out
- It causes issues without community ordinances or clear acceptance criteria

You can help resolve these!



Who is responsible?

The Waste Generator* is responsible for legal disposal.

Examples of Waste Generators:

- Homeowners
- Schools
- Contractors

* Waste Generator = whoever is creating the waste.

How to protect the landfill from improper disposal

Prior to accepting landfill staff should evaluate:

- Ordinances and/or procedures for acceptance
- Costs incurred for handling
- Landfill space requirements

Ordinance Template available on Solid Waste Program website.



Ordinances





Ordinances

Clear ordinances benefit everyone



- No Surprises
- Protective of human health and the environment
- Know what has been agreed upon
- Compensated appropriately for accepting the waste
- Ability for proper management of the landfill

Preliminary Planning is Important

Planning Considerations for C&D Debris:
Handling Costs or In-Kind Services
Cover Material Availability
Personnel Needed
Landfill Space Required




Lack of
planning
results in a
big mess at
the landfill.



In-Kind

If charging for In-Kind Services make sure it is a fair trade.



What are
some of
the costs to
consider?



Equipment- fuel, operator, wear and tear

Landfill Operator- may require additional billable hours

Landfill Space- it can cost millions of dollars to build a new landfill



Calculating Landfill Space

If this landfill was 500ft by 500ft with 10 ft high berms, it would have:

$500\text{ft} \times 500\text{ft} \times 10\text{ft} = 2,500,000$ cubic feet of airspace. 1 cubic foot equals .037 cubic yards, or 92,592 cubic yards. If the landfill cost 8 million dollars to build, the airspace costs $\$8,000,000$ divided by 92,592 cubic yards = \$86.40 per cubic yard.

So for just the airspace, if a project wanted to bring you 1 dump truck of C&D it would cost \$860.40. Most dump trucks in rural Alaska are a 10 cubic yard box.

Most rural projects bring 10+ dump truck loads of C&D debris to the landfill.



C&D Disposal Cost Examples



To dispose of a 10 yards or one dump truck full of C&D debris at these landfills it will cost:

How much does disposal cost at your landfill?

Fairbanks North Star Borough Landfill- \$690

Anchorage Regional Landfill- \$197.25

Juneau Capitol Landfill - \$388

Nome Inert Waste Monofill- \$155

Central Peninsula Landfill in Soldotna- \$135



Pre-demolition Waste Screening

A Building Survey should be conducted before demolition by the waste generator to identify and remove:

- Lead Based Paint
- Asbestos
- Items that contain Mercury
- Hazardous Wastes

***Ask for a copy of the Building Survey prior to accepting C&D debris at the landfill.**





Post-demolition Screening

The landfill operator should look at each load delivered to the landfill.

- Look for bags of asbestos
- Waste that is too hard to compact
- Wiring or cables that can damage heavy equipment
- Electronics
- Hazardous waste



Other Disposal Options are Available



- One-Time Authorization for C&D Monofill
- Backhaul to Permitted Disposal Site



One-Time C&D Monofill

Requirements:

Landowner Consent

Consists solely of inert and non-RACM waste

Waste generated locally

From a single project

Less than 1000 cubic yard disposal

Must be open, filled, and closed in a single year

Closure plan and report required





Backhaul


Waste can be backhauled to a larger permitted facility for disposal



Waste Generator should be made aware that disposal is not available locally before project starts.

Options for backhaul:

- Inert Waste Monofill
- Class I Landfill



Division of Environmental Health
SOLID WASTE PROGRAM

HOME
HOW DO I DISPOSE OF... ?
WASTE IN RURAL COMMUNITIES
PERMIT APPLICATIONS
CONTACT US



Construction and Demolition Waste
Guidance Document
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Alaska Department of Environmental Conservation
Division of Environmental Health
Solid Waste Program

Construction and Demolition waste (C&D) constitutes 25% to 40% of the waste disposed in the United States. Proper management of C&D is important to protect workers and can reduce project costs. In planning a C&D project, consideration must be given to material hazards, the salvaging of reusable materials, and to proper disposal options.

Building Survey


Before a demolition or renovation project begins, federal regulations require the **identification of any asbestos-containing materials (ACM) or other hazardous materials in the structure**. A person trained to identify potentially hazardous materials must conduct and record a building survey of the structure and any contained materials.

All hazardous materials must be removed and properly disposed prior to demolition. In particular, ACM must be removed, managed, and disposed in compliance with the Environmental Protection Agency (EPA) National Emissions Standards for Hazardous Air Pollutants (NESHAP) requirements [40 CFR 61, subpart M]. Workplace safety standards and disposal requirements require any contractor to identify and properly manage all ACM; however, the NESHAP standards only apply to commercial structures, institutional structures, or residential buildings with more than four units.

For homeowners doing their own demolition or renovation, identifying ACM is also important to prevent exposure to asbestos fibers, which are known to cause cancer and other lung disease.

Asbestos

Any potential ACM identified in the building survey must be sampled and tested; if it contains more than 1% asbestos, it must then be categorized as friable or regulated ACM (RACM), or as Category I or Category II non-friable ACM, which are often referred to as non-RACM. These categories determine how the materials must be managed during removal and disposal.



For all demolitions of commercial structures, institutional structures, or residential structures with more than four units, federal law requires ***you submit notice to EPA at least 10 days before any demolition begins*** regardless of the presence of hazardous materials or ACM. More information is available by calling the EPA Alaska Operations office or online at <http://www.epa.gov/asbestos/epas-notification-rules-and-regulations-regarding-demolition-asbestos-containing-structures>.

Links to Applications and more Information

DEC Solid Waste Program Website

Guidance Documents

Ordinance Template

Letters to Contractors

Applications

Contacts for questions

Link to our website:

<https://dec.alaska.gov/eh/solid-waste/>

